

WORK ORDER NO.: U93INSPECTION NO.: 11367

ENGINE INSPECTION RECORD

CUSTOMER: Cub CraftersW/O DESCRIPTION: New Build

AIRCRAFT MAKE & MODEL: _____

MANUFACTURER: Superior BATCH: _____MODEL: CC-363iENGINE S/N#: 1002 CC363i-1002KIT P/N: 10-360-J6X3-AS-CC-1 KIT S/N#: 36D171869**MAIN CRANKCASE**Part No. SX36850-R3 M/N#: S2001Main Bearing Bores New Main Bearings NewCam Bearing NewC/C Mating Faces New Thrust Surface NewCyl. Base Pads New Through Bolts and Studs NewTappet Bores New Engine Mount /Tappet Bodies New Oil Passages New, clean + clearHydraulic Units New Inverted Flight Mods N/A.Governor Drive Gear New Governor Driven Gear NewMount Style Conical

Remarks: _____

INSP INT. ☐**CRANKSHAFT**Part No. SL36650C S/N#: 000322Main Journals, Sizes 1. 2.3755 2. 2.3751 3. 2.3755 4. N/A.Crankpin Journals, Sizes 1. 2.1245 2. 2.1245 3. 2.1245 4. 2.1245 5. N/A 6. N/A.Thrust Face New Flyweights NewFlyweights Bushings New C/Shaft Cheek Bushings NewRear Dowel/Threads New Front Bushings NewRunout Centre 0.0005" Runout Flange 0.001" Runout Pilot 0.0005"Gear C/Shaft New C/Shaft Gear Retaining Bolt NewSludge Tubes N/A Starter Ring Gear New

Remarks: _____

INSP INT. ☐**CAMSHAFT**Part No. SV18805-2 S/N#: 68T17/99 010Bearing Journals New Camshaft Lobes NewCamshaft Gear New

Remarks: _____

INSP INT. ☐

CONNECTING RODSPart No. 72450

	Align	Bearings	Bushings	Bore Sizes	Nuts & Bolts	Weight	S/N#
1.	New	New	New	New	New	1068.2	1
2.	"	"	"	"	"	1072.2	2
3.	"	"	"	"	"	1073.6	3
4.	"	"	"	"	"	1074.0	4
5.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6.	"	"	"	"	"	"	"

Remarks: _____

INSP INT. ☐**ACCESSORY CASE**Part No. 5L77997S/N#: MTM 4585Oil Filter Adaptor/Screen 90 degree NewRelief Valve New, SilverVernatherm Valve NewVacuum Pump Adapter/Gear NewOil Pump Body NewPump Body Plug N/AOil Pump Plate NewOil Pump Shafts NewOil Pump Shaft Bores NewOil Pump Gears NewAll Accessory Drive Gears NewOil Suction Tube and Strainer New

Remarks: _____

INSP INT. ☒**MISCELLANEOUS**Colour graphite 917120Kit Type New Superior 360Sump Mfg Cub CadetIntake Pipes NewFlanges Intake NewCylinder Drain Tubes NewHose Clamps NewOil Tube and Screen Assy. NewPush Rods NewPush Rod Covers NewRocker Covers New

Remarks: _____

INSP INT. ☐**CYLINDERS**

***** COMPLETE CYLINDER INSPECTION CHECKLIST *****

INSP INT. ☐**ACCESSORIES**

Ignition _____

Electronic Ignition Bushspeed mini crank trigger NewStarter Hatzel SR2-9021 NewCarburetor/Fuel Injector precision New

Comments _____

CRANKSHAFT & CONNECTING RODS

Installation of Sludge Tubes.....MA-
Positioning of Counterweights.....
Installation of Counterweight Locks
Rod Bolt P/N SL75060 Batch# _____
Check Con Rod Bolt 2-255-2-256 (420-660 in/lbs) ☐ Torque or ☒ Stretch
Positioning of Connecting Rods.....
Rod Bearing P/N SL13212A Batch# _____
Size STD
Nose Seal P/N SL137A2 Batch# _____

[illegible]

MAIN CRANKCASE

Oil Passages Clear
Installation of Internal Plugs
Installation of Rubber O'Rings
Main Bearing P/N SL16711A Batch#
Size STD
Front Main Bearing P/N SL13884A Batch#
Size STD
Crankshaft End Clearance 0.012"
Crankshaft Oil Slinger Clearance 0.004"
Camshaft End Clearance 0.005"
Governor Drive End Thrust front 0.012"
Piston Cooling Nozzles Installed phased
Dual Beam Style Thru Bolt Torqueing

[illegible]

ACCESSORY CASE PART I

Check Crank Gear for Seating
 Check Oil Pump Nuts for Proper Torque
 Check 3/8" Split Line Nut for Proper Torque
 Check (3) 1/4" Split Line Nuts for Proper Torque
 Check (3) Idler Shaft Bolts for Proper Torque
 Check Idler Shaft Nut for Proper Torque

TECHNICIAN	INSPECTION
26	NS
27	NS
28	NS
29	NS
30	NS
31	NS

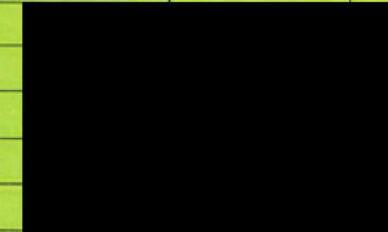
ACCESSORY CASE PART II

Gear Train Installation
Gear Train for Backlash
Gear Train for End Clearance
Gear Train for Locking Devices
Valve Timing
Lock Wire Oil Pump Nuts
Install Oil Pump Body Plug
Torque of all Bolts and Nuts
Inspection of Sub-Assembly

TECHNICIAN	INSPECTION
	4

CYLINDER AND VALVE ASSEMBLY

Complete Cylinder Inspection
Dual Cylinder Base Nut Torqueing.....
Cylinder Base Nuts for Torque.....
Rocker Arms for Positioning.....
Valve Clearance.....

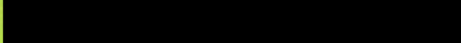
TECHNICIAN	INSPECTION
	

COMPONENTS

Installation and Timing of Magnetos.....
Hall Effect Nut.....
Cotter Pin in Drive Gears.....
Installation of Ignition Harness.....
Installation of ~~Carburetor~~ / Injector.....
Final Inspection Prior to Test.....

TECHNICIAN	INSPECTION
	

REMARKS: _____

		
TECHNICIAN INT.	FINAL INSPECTOR INT.	PRODUCTION INT.
		
STAMP	STAMP	STAMP
June 13/17	June 13/17	June 14/17
DATE	DATE	DATE



INSPECTION CC363i ENGINE ASSEMBLY

This inspection shall be accomplished during the engine assembly process.

ENGINE SERIAL #	CC363I-1002
WORK ORDER #	U93
INTERNAL ID #	11367
PURCHASE ORDER #	813380-#2
FINAL WEIGHT	271.5

Verify correctness of all parts and procedures prior to further assembly of crankcase halves to the crankshaft assembly. In-process assembly inspection shall include visual inspection of parts and written records in accordance with the assembly guidelines in this Overhaul Manual.

TABLE 1 - CRANKCASE AND CRANKSHAFT ASSEMBLY

PERFORM THE FOLLOWING INSPECTIONS AND INITIAL EACH ITEM:				TECH 1	TECH 2
1.1	Crankcase match numbers, each half	L: S2001	R: S2001	ST	SM
1.2	Crankshaft P/N & S/N verified	Part #: SL36650C	Serial #: 000322	ST	SM
1.3	Camshaft P/N & S/N verified	Part #: SV18805-2	Serial #: GPT17/99 010	ST	
1.4	Main bearing part numbers correct and fit properly; oil holes present and clear; bearing dowels present and correct height			ST	
1.5	All pipe plugs, nozzles, oil passage plugs and fittings are properly installed in the case halves			ST	
1.6	Lifter bodies fit properly in lifter bore and all bodies are installed			ST	
1.7	Install lifter bolts with washer, blue Loctite, 50 in/lbs. and lock wire			ST	
1.8	Camshaft rotates freely in each case half, end clearance correct			ST	
1.9	All crankcase mating surfaces clean, free of burrs and/or scoring			ST	
1.10	Crankshaft thrust bearing and slinger clearance correct			ST	
1.11	Connecting rod side clearance correct (0.004-0.010)			ST	
1.12	Connecting rod installation and rod/cap match number orientation correct			ST	
1.13	Connecting rod nut assembly correct with the raised face visible; torque correct 420-660 in/lbs. Stretch Bolt 2.255-2.256			ST	
1.14	Connecting rods spin freely on crankpin with no binding			ST	
1.15	Measure crankshaft connecting rod journal radius with 9/64" gauge			ST	
1.16	Ensure that bearing is not protruding into crankshaft connecting rod journal radius			ST	
1.17	Nose bolts are installed with O-rings in the right case half			ST	
1.18	O-rings present on rear thru studs in right case half and at 4 main saddles, left case half			ST	
1.19	Crankshaft gear fully seated, clearance checks OK; bolt torque, lock tab secure			ST	
1.20	Crankshaft seal installed with the flat side toward crankshaft prop flange; spring correctly installed in the seal groove or lip			ST	
1.21	Front main bearing on the crankshaft has correct part number, alignment marks match and are correctly oriented			ST	

1.22	Front governor free play specification (0.008-0.016)	ST	
1.23	Crankshaft counterweights, correct part numbers; weight within 2 grams	ST	
1.24	Counterweight bushings correct, no binding, circlips installed correctly and checked for gap.	ST	

Inspect and verify the correct assembly of cylinders and assembly hardware, including proper torque and safety techniques. Verify the internal timing of the crankshaft gear, camshaft gear, and idler gear as well as proper clearances and gear lash. In-process assembly inspection shall include visual inspection of parts and written records in accordance with the assembly guidelines in this Overhaul Manual.

TABLE 2- CYLINDERS AND ASSEMBLY HARDWARE

PERFORM THE FOLLOWING INSPECTIONS AND INITIAL EACH ITEM:		TECH 1	TECH 2
2.1	Sealer and silk thread properly applied	ST	
2.2	Crankcase halves properly assembled keeping front main bearings in place	ST	
2.3	O-rings in place as case halves were drawn together	ST	
2.4	Crankshaft seal properly seated in both halves	ST	
2.5	Peripheral hardware in place to hold case halves together	ST	
2.6	Center and front thru bolts properly installed and centered	ST	
2.7	Valves, springs and keys properly assembled, two springs on each valve	ST	
2.8	Pistons correct part number, weights match OK; skirt clearance in cylinder within limits	ST	
2.9	Piston rings correct type; end gap and side clearance within limits and in correct position	ST	
2.10	Base seal on each cylinder barrel skirt before installation on crankcase	ST	
2.11	Torque of cylinder base nuts correct and checked per Section 10	ST	
2.12	Torque on all crankcase assembly hardware in accordance with Section 10	ST	
2.13	Slotted nut on drilled stud under the camshaft gear torqued; safety wire installed	ST	
2.14	Safety wire on drilled belly bolts/slotted nuts at sump location	ST	
2.15	Idler shaft hardware tabs bent over	ST	

2.16	Clearance between the idler shaft stud and left idler gear OK	ST	
2.17	Timing marks align correctly between the crankshaft gear, idler gear, and camshaft gear with #1 cylinder on TDC (Top dead center)	ST	
2.18	Backlash of the idler gears with the crankshaft gear and camshaft gear within limits	ST	

Inspect and verify proper installation, safety, and clearances of the cylinder valve train and accessory housing subassembly prior to rocker cover and accessory housing installation. This quality inspection shall include visual inspection of assembly and safety techniques. A physical check of clearances shall be performed as described in this list.

TABLE 3 - CYLINDER VALVE TRAIN & ACCESSORY HOUSING SUBASSEMBLY, PRIOR TO ROCKER COVER AND ACCESSORY HOUSING INSTALLATION

PERFORM THE FOLLOWING INSPECTIONS AND INITIAL EACH ITEM:		TECH 1	TECH 2
3.1	Hydraulic units proper part number and checked for free operation	ST	
3.2	Hydraulic units and pushrod sockets correctly installed	ST	
3.3	Pushrod tube seals installed correctly and in proper position	ST	
3.4	Pushrod tube retainer spring correctly installed over each pushrod; lock tab secure	ST	
3.5	Exhaust valve rotator cap present on the stem of each exhaust valve	ST	
3.6	Dry tappet clearance for each rocker arm checked and within limits per Section 10	ST	
3.7	Rocker shaft thrust buttons present in each rocker shaft	ST	
3.8	Valve rocker covers properly installed; torque of attaching screws correct for gasket.	ST	
3.9	Accessory case inspected for freedom from damage, general condition OK	ST	
3.10	Plugs and fittings installed correctly	ST	
3.11	Oil pump pad in serviceable condition	ST	
3.12	Oil pump housing attaching nuts correctly safety wired and torqued per manual	ST	
3.13	Oil pump drive shaft rotates smoothly	ST	
3.14	Fuel pump plunger installed correctly (head contacts idler gear)	ST	

Inspect and verify proper installation, safety, and clearances of the cylinder valve train and accessory housing subassembly after rocker cover and accessory housing installation. This quality inspection shall include visual

inspection of assembly and safety techniques. A physical check of clearances shall be performed as described in the list.

TABLE 4- CYLINDER VALVE TRAIN & ACCESSORY HOUSING SUBASSEMBLY AFTER ROCKER COVER AND ACCESSORY HOUSING INSTALLATION.

PERFORM THE FOLLOWING INSPECTIONS AND INITIAL EACH ITEM:		TECH 1	TECH 2
4.1	Accessory case properly installed, gasket trimmed and hardware torqued	ST	
4.2	Inter-cylinder baffles correct for cylinder type; installation correct	ST	
4.3	Oil sump securely installed; suction screen and drain plugs installed and safety wired	ST	SM
4.4	Oil pressure relief valve secure; safety wire in place	ST	SM
4.5	Oil dipstick and dipstick tube properly installed; safety wire in place		
4.6	Cylinder drain tubes installed correctly; B-nuts tight, hose clamps secure	ST	
4.7	Intake pipe flanges and gaskets installed correctly; flange mates parallel to port surface. Intake elbow must protrude into head port a minimum of .250" to max of .500"	ST	
4.8	Ensure there is a .060" to .250" gap between induction tub elbow and sump induction tubes	ST	

Inspect and verify proper installation of the fuel pump, prop governor and adapter, governor oil line, oil filter adapter or pressure screen, carburetor or fuel injection system, ignition system, starter, alternator, starter gear support assembly and ignition timing. This quality inspection shall include visual and physical inspections of the complete engine assembly. This inspection shall be accomplished after the engine assembly has been completed and prior to engine test.

TABLE 5- ACCESSORIES

PERFORM THE FOLLOWING INSPECTIONS AND INITIAL EACH ITEM:		TECH 1	TECH 2
5.1	Oil pressure screen and housing secure; bypass plunger and spring installed		
5.2	Fuel servo installation correct and secure, a gasket is installed on each side of the bracket	ST	
5.3	Fuel lines bent and secured by clamps, fittings tight	ST	
5.4	CDI ignition system components properly installed and secure	ST	
5.5	Starter correct model for ring gear type; starter installation secure	ST	
5.6	Starter gear support properly indexed; gear teeth match starter drive	ST	
5.7	CDI system timing correct heat range; installed and torqued; ignition leads properly routed and clamped - 22° Ring (42)	ST	
5.8	Spark plugs correct heat range; installed and torqued; ignition leads properly routed and clamped	ST	SM
5.9	All hardware secure, air inlet, exhaust ports and breather fitting fitted with plug or covers		SM
5.10	Remove fuel control servo and fuel pump at servicing.		SM
5.11	Engine preserved awaiting installation.		

TABLE 6 - VERIFICATION

ENGINE SERIAL NUMBER:		CC363I-1002	
ENGINE COMPLETED ON:		JUNE 13TH 2017	
		DATE	
ENGINE COMPLETED BY TECHNICIAN 1:		Simon Travers, SCA 26	Digitally signed by Simon Travers, SCA 26 Date: 2017.06.13 09:14:46 -07'00'
ENGINE COMPLETED BY TECHNICIAN 2:		Steven Makarra, SCA 23	Digitally signed by Steven Makarra, SCA 23 Date: 2017.06.15 07:49:00 -07'00'
OTHER			
		SIGNATURE	
COMMENTS			

Weather: Sunny with Clouds

Air Temp.: 76.5 °F

Barometric Pressure: 29.8 " Hg

Humidity: 28 %

Owner: Cub Crafters

Date: June 13, 2017

Tester: Lee Whittingstall/Doug Hamerton

W/O #: U93

Model: CC363i

Serial #: CC363i-1002

Signature:



TIME	TIME RUN	RPM	MAN. PRES.	OIL PRESS. FRONT	OIL PRESS. REAR	METERED	UNMETERED	OIL TEMP	FUEL FLOW	CHT				EGT			
										1	2	3	4	1	2	3	4
16:00	5	1200	11.0	65.0	76.0	1.2	33.0	100	5.2	225	214	230	240	954	962	1027	1036
16:20	20	1500	12.5	64.0	73.0	1.5	32.5	155	5.9	240	247	251	260	976	1020	1034	1072
16:30	10	1800	15.3	70.0	79.0	1.8	32.5	176	7.2	251	263	261	275	1028	1080	1078	1096
16:40	10	2000	17.4	66.0	77.0	2.0	32.2	190	8.4	256	266	261	279	1085	1130	1129	1141
16:50	10	2200	20.9	69.0	80.0	3.0	32.1	200	10.9	268	278	271	290	1141	1171	1173	1181
17:00	10	2400	23.6	67.0	80.0	4.2	32.0	206	13.3	275	281	275	300	1195	1205	1210	1227

COOL DOWN, CHECK ENGINE, WASH, CHECK OIL LEVEL FOR OIL CONSUMPTION RUN

TIME	TIME RUN	RPM	MAN. PRES.	OIL PRESS.		OIL PRESS. REAR	METERED	UNMETERED	OIL TEMP	FUEL FLOW	CHT				EGT			
				FRONT							1	2	3	4	1	2	3	4
07:45	5	2700	27.9	76.0	87.0	8.2	31.8	165	18.4		290	258	279	317	1228	1186	1244	1188
8:15	30	2700	28.0	70.0	81.0	8.2	31.8	176	18.4		304	268	286	336	1221	1175	1235	1176
8:20	5	650	13.0	46.5	52.0	1.1	33.3	172	2.0		270	260	275	318	838	856	970	942
ACCEPTANCE RUN																		
9:30	15	2700	27.7	74.0	86.0	8.1	31.8	171	18.0		281	266	275	331	1218	1182	1230	1186
9:45	5	650	12.0	50.0	56.0	1.1	33.5	162	0.9		240	252	247	279	937	897	1012	964

PERFORMANCE DATA

Total Oil Con.	0.15 pints	#1	74	#2	75	#3	73	#4	73
Idle RPM	650								
Idle Oil Pres.	55 PSI @ 750								
Fuel Octane	100 LL								
Oil Grade	AEROSHELL 100 MINERAL	#1	90 °F	AFTER 2 MIN					
		#2	93 °F	AFTER 3 MIN					
RPM Drop	L. Mag. 25 R. Mag. 25								
Acceleration check	PASS								
Rise at Idle Cut Off	10 RPM 750	#1	80	RANGE 60-85					
Gov Check	26/40	#2	78	RANGE 60-85					
Notes: Inhibited									

Section 3A: Engine Service and Maintenance Log

DATE / /	TIME RUN		TIME SINCE OVERHAUL		CYCLES	
	HOURS	MIN	HOURS	MIN	Sub Total	TOTAL
BROUGHT FORWARD						

INSTALLATIONS, INSPECTIONS

June 15, 2017

AERO SPORT POWER

Kamloops B.C. V2B 7W8 Canada

LOGBOOK INSERT



Built by: Aero Sport Power

Engine Hours:

NEW

Engine Model:

CC363i

Work Order #:

U93

Engine Serial Number:

CC363i-1002

Inspection #:

11367

This engine has been assembled, inspected, and test run in accordance with Aero Sport Power Procedures and the manufacturers technical data.

As per the customers request, the fuel pump, fuel control servo, and plenum & brackets have been removed and will require installation before test flight.

It is the owner's responsibility to monitor AD's, SB's and SI's to ensure they are complied with.

Authorized Signature
Title: Production Manager

Date: June 15, 2017

THIS PAGE
TOTALS

PREVIOUS
TOTALS

TOTALS
SINCE NEW

CARRY FORWARD to Top of Next Page

ENGINE DATA

1. Make Superior
2. Model CC363i
3. Specification _____
4. Manufacturer's Serial Number CC363i-1002
5. Date of Manufacture _____
6. Aircraft Inspection Cycle _____